

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
TEXARKANA DIVISION**

DANCO, INC.

§

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v.

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CASE NO. 5:16-cv-73-JRG-CMC

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FLUIDMASTER, INC.

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MEMORANDUM OPINION AND ORDER

The above-referenced case was referred to the undersigned United States Magistrate Judge for pre-trial purposes in accordance with 28 U.S.C. § 636. Before the Court are Plaintiff Danco, Inc.'s Opening Claim Construction Brief (Dkt. No. 88), Defendant Fluidmaster, Inc.'s Responsive Claim Construction Brief (Dkt. No. 92), Plaintiff Danco, Inc.'s Reply Brief on Claim Construction (Dkt. No. 93), and Defendant Fluidmaster Inc.'s Surreply in Support of its Responsive Claim Construction Brief (Dkt. No. 99).¹

A claim construction hearing, in accordance with *Markman v. Westview Instruments, Inc.*, 52 F.3d 967 (Fed. Cir. 1995) (en banc), *aff'd*, 517 U.S. 370 (1996), was held on August 15, 2017. After hearing the arguments of counsel and reviewing the relevant pleadings, presentation materials, other papers, and case law, the Court finds the disputed terms of the patents-in-suit should be construed as set forth herein.

¹ At the claim construction hearing, Fluidmaster requested it be allowed to file a surreply. The Court granted Fluidmaster's request and allowed Fluidmaster to file a surreply regarding the issue of Dr. Klopp's qualifications. Danco filed objections to Fluidmaster's surreply, asserting it exceeds the limited scope of the surreply allowed by the Court; presents new evidence on claim construction; and misrepresents prior testimony by Dr. Klopp on claim construction. Fluidmaster moved to strike Danco's objections, asserting they are procedurally improper and the surreply is within the scope of the Court's order. The Court, having considered the motion, the expedited response, and the expedited reply, is of the opinion the motion to strike should be **DENIED**. The Court has considered Danco's objections and is of the opinion they should be **OVERRULED**.

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I. INTRODUCTION

Plaintiff Danco, Inc. (“Danco”) brings suit against Defendant Fluidmaster, Inc. (“Fluidmaster”), alleging infringement of United States Patents Nos. 8,943,620 (“‘620 Patent”) and 9,181,687 (“‘687 Patent”) (collectively, the “patents-in-suit”).

In general, the patents-in-suit, both entitled “Adaptation of Flush Valve for Dual Flush Capability,” are “directed to systems and methods for adapting preexisting single-flush flush valves so that they are compatible with flush mechanisms, such as dual-flush canisters, without having to replace either the entire toilet tank and/or the entire existing flush valve.” (Dkt. No. 88 at 1). Specifically, the Abstract of the ‘620 and ‘687 Patents states the patents-in-suit disclose “[v]arious apparatuses and methods that facilitate dual flush capability.” *See id.*, Ex. A² (‘620 Patent) and Ex. B (‘687 Patent) at “Abstract.” The Abstract further describes “a dual flush mechanism configured to provide for a dual flush capability in a toilet,” where “[t]he dual flush mechanism can include a basket structure” and an attached “gasket” that “can form a seal between the dual flush mechanism and a flush orifice of a flush valve.” *Id.* As a result, the dual flush mechanism can be installed with the existing toilet flush valve to provide dual flush capability. *Id.*

Danco’s opening brief submits that Fluidmaster has directly infringed and continues to infringe Claims 1-2, 4, 11-12, and 20 of the ‘620 Patent and has indirectly infringed and continues to infringe Claims 21-22 of the ‘620 Patent. Danco further contends Fluidmaster has directly infringed and continues to infringe at least Claims 4, 7, 9, 13-15, 17, and 19-21 of the ‘687 Patent.

² Danco’s opening claim construction brief included Exhibits A-T. Fluidmaster’s Responsive Brief included Exhibits 1-24, as well the Declaration of Richard W. Klopp, Ph.D., P.E. Danco’s reply brief included Exhibits U-Z, and Fluidmaster’s surreply brief included Exhibits 25-28, as well as a Supplemental Declaration of Richard Klopp.

Independent Claims 1 and 21 of the '620 Patent recite as follows:

1. An apparatus, comprising:
 - a flush mechanism configured to provide for a predefined flush capability in a toilet;
 - and
 - a gasket detachably attached to the flush mechanism, the gasket forming a seal between the flush mechanism and a flush orifice of a flush valve, the seal being maintained during a full flush of the toilet by the flush mechanism, where the flush valve is configured to seat a sealing member.
21. A method, comprising the steps of:
 - removing a sealing member from a flush valve in a toilet, the flush valve including a flush orifice that is sealed by the sealing member;
 - positioning an adaptor having a gasket over the flush orifice of the flush valve so that the gasket comes into contact with the flush orifice, thereby creating a seal between the adaptor and the flush orifice; and
 - attaching a dual flush canister to the adaptor with the gasket in contact with the flush orifice, the dual flush canister providing for a dual flush capability.

II. BACKGROUND

On March 2, 2010, MJSI (later acquired by Danco) filed a non-provisional utility application entitled "ADAPTATION OF FLUSH VALVE FOR DUAL FLUSH CAPABILITY" which claimed priority to two provisional applications. (Ex. 1). This application matured into the '620 Patent. (Ex. A).

The U.S. Patent and Trademark Office ("PTO") issued an office action on the '620 application (the "First Office Action") which invoked and repeated the rejections asserted in a parallel International Search Report and Written Opinion ("ISR/WO"). (Exs. 2,7). Original Claim 1 was rejected as anticipated by USPN 6,829,787 ("Pipenburg"). *Id.* Pipenburg discloses an apparatus comprising a flush mechanism configured to provide a predefined flush capability in a toilet, a gasket attached to the flush mechanism, the gasket forming a seal between the flush

mechanism, and a flush orifice of a flush valve where the flush valve is configured to seat a sealing member. (Exs. 2, 3).

Original Claim 21 (the independent method claim) was also found obvious over Pipenburg in view of USPN 4,145,774 (“Sullivan”) (Ex. 4), USPN 3,839,746 (“Kowalski”) (Ex. 5), and US Pub. 2005/0172387 (“Higgins”) (Ex. 6). According to Fluidmaster, this was because (1) Pipenburg discloses a method of positioning a gasket over a flush orifice of a flush valve so that the gasket comes into contact with the flush valve, thereby creating a seal at the flush orifice; and (2) Sullivan, Kowalski, and Higgins each disclose removing a sealing member from a flush valve, positioning an adapter and attaching a dual flush canister to the adapter, the dual flush canister providing a dual flush capability, and an adapter having an attached gasket (the gasket forming a seal with the flush valve in a toilet). (Ex. 2).

The First Office Action also rejected original Claims 1 and 21 as anticipated by USPN 3,758,893 (“Smolinski”) (Ex. 8), US Pub. 2008/0201833 (“Scruggs”) (Ex. 9), USPN 3,839,747 (“Clark”) (Ex. 10), and USPN 5,325,547 (“Pino”) (Ex. 11).

Danco Responded to the First Office Action, including the following claim amendments:

Original Claim 1	8/16/2013 Amended Claim 1
An apparatus, comprising: A flush mechanism configured to provide for a predefined flush capability in a toilet; and A gasket attached to the flush mechanism, the gasket forming a seal between the flush mechanism and a flush orifice of a flush valve, where the flush valve is configured to seat a sealing member	An apparatus, comprising: A flush mechanism configured to provide for a predefined flush capability in a toilet; and A gasket <u>detachably</u> attached to the flush mechanism, the gasket forming a seal between the flush mechanism and a flush orifice of a flush valve, <u>the seal being maintained during a full flush of the toilet by the flush mechanism</u> , where the flush valve is configured to seat a sealing member

Original Claim 21	8/16/2013 Amended Claim 21
A method, comprising the steps of: removing a sealing member from a flush valve in a toilet; positioning an adaptor having a gasket over a flush orifice of the flush valve so that the gasket comes into contact with the flush orifice, thereby creating a seal between the adaptor and the flush orifice, and attaching a dual flush canister to the adaptor, the dual flush canister providing for a dual flush capability.	A method, comprising the steps of: removing a sealing member from a flush valve in a toilet, <u>the flush valve including a flush orifice that is sealed by the sealing member</u> ; positioning an adaptor having a gasket over a flush orifice of the flush valve so that the gasket comes into contact with the flush orifice, thereby creating a seal between the adaptor and the flush orifice, and attaching a dual flush canister to the adaptor, the dual flush canister providing for a dual flush capability.

Danco argued amended Claim 1 was patentable over Pipenburg by distinguishing bottom valve 10 of Pipenburg from the “detachably attached” gasket of the ‘620 Patent (Ex. 12). Danco argued “*Pipenburg* does not disclose or suggest that the seal formed by the gasket is maintained during a full flush of the toilet” by the flush mechanism. *Id.* at 8. Similarly, Danco argued Smolinski, Clark, Scruggs, and Pino did not teach “a gasket detachably attached to the flush mechanism, the gasket forming a seal between the flush mechanism and a flush orifice of a flush valve, the seal being maintained during a full flush of the toilet by the flush mechanism.”

The PTO issued a Second Office Action, which again rejected all pending claims, finding Pipenburg anticipated amended Claims 1-3 and 20-21 and that all remaining claims were obvious in view of various prior art combinations. (Ex. 13). In response to the Second Office Action, Claim 21 (but not Claim 1) was further amended (Ex. 14).

8/16/2013 Amended Claim 21	4/18/2014 Amended Claim 21
A method, comprising the steps of: removing a sealing member from a flush valve in a toilet, <u>the flush valve including a flush orifice that is sealed by the sealing member</u> ;	A method, comprising the steps of: removing a sealing member from a flush valve in a toilet, the flush valve including a flush orifice that is sealed by the sealing member;

positioning an adaptor having a gasket over a flush orifice of the flush valve so that the gasket comes into contact with the flush orifice, thereby creating a seal between the adaptor and the flush orifice, and attaching a dual flush canister to the adaptor, the dual flush canister providing for a dual flush capability.	positioning an adaptor having a gasket over [[a]] <u>the</u> flush orifice of the flush valve so that the gasket comes into contact with the flush orifice, thereby creating a seal between the adaptor and the flush orifice, and attaching a dual flush canister to the adaptor <u>with the gasket in contact with the flush orifice</u> , the dual flush canister providing for a dual flush capability.
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In its Response to the Second Office Action, Danco repeated prior arguments and emphasized that Pipenburg did not teach “that the seal formed by the gasket is maintained during a full flush of the toilet as recited in claim 1.” (Ex. 14 at 9). According to Danco, the seal between the lower surface of the valve seal portion 10e of the bottom valve 10 and the flush valve 34 is “broken during full flush operation.” *Id.* Danco stated Pipenburg’s bottom valve is unseated in its flush mode, and Pipenburg did not disclose a “detachable” gasket because Pipenburg’s bottom surface 10e was molded to bottom valve 10. *Id.* at 10-11. Accordingly, Danco argued the “alleged inherent characteristic (*i.e.*, that the gasket defined by lower surface of member 10 is detachably attached to member 10) does not necessarily flow from the teachings of *Pipenburg*.” *Id.* at 11.

As to Claim 21, Danco argued the Second Office Action failed to address the features on Claim 21 and further that Pipenburg did not disclose “attaching a dual flush canister to the adaptor with the gasket in contact with the flush orifice, the dual flush canister providing for a dual flush capability.” *Id.* at 13-14 (emphasis in original). Danco argued Pipenburg instead teaches that its assembly 10 is both an adapter and dual flush valve, thus does not teach attaching a dual flush canister to a separate adaptor. *Id.* at 14.

The PTO accepted the arguments, and the ‘620 Patent issued on February 3, 2015. (Ex. A). Before the ‘620 Patent issued, Danco filed a continuation application which claimed priority to the

‘620 Patent and each of the 2009 provisional applications. (Ex. 16). This application matured into the ‘687 Patent. (Ex. B). During prosecution, the PTO issued an election requirement, finding the ‘687 application contained claims directed at five “patentably distinct species” divided in groups among the figures. (Ex. 17 at 4). Danco responded and elected a particular species (Species V) without traverse. (Ex. 18 at 8). Danco also argued Claims 1-3 were generic to all species and that Claims 21-22 were generic to three species (Species I, IV, and V). *Id.* However, according to Fluidmaster, Claims 1-3 did not issue in their original form because Danco amended such claims to include a limitation which was not alleged to be a generic. *Id.* Original Claims 21 and 22 did issue as Claims 20 and 21, respectively. Danco later received a notice of allowance, and the ‘687 Patent issued on November 10, 2015. (Ex. B).

Fluidmaster petitioned *Inter Partes Review* (“IPR”) of the ‘620 Patent (Ex. L) and of the ‘687 Patent. (Ex. S). On July 28, 2017, the Patent Trial and Appeal Board (“PTAB”) issued a decision denying institution of IPR against the ‘620 Patent. (Ex. 19). On August 1, 2017, the PTAB issued a decision to institute IPR against Claims 1-3 of the ‘687 Patent. (Ex. 20).

III. LEGAL PRINCIPLES

A. Claim construction

The claims of a patent define the invention to which the patentee is entitled the right to exclude. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc). Claim terms are given their ordinary and customary meaning to one of ordinary skill in the art at the time of the invention, unless there is clear evidence in the patent’s specification or prosecution history that the patentee intended a different meaning. *Id.* at 1312-13. Claim construction is informed by the intrinsic evidence: the claims themselves, patents’ specifications, and the prosecution histories. *Id.* at 1315-17.

“The claim construction inquiry . . . begins and ends in all cases with the actual words of the claim.” *Renishaw PLC v. Marposs Societa’ per Azioni*, 158 F.3d 1243, 1248 (Fed. Cir. 1998). “[I]n all aspects of claim construction, ‘the name of the game is the claim.’” *Apple Inc. v. Motorola, Inc.*, 757 F.3d 1286, 1298 (Fed. Cir. 2014) (quoting *In re Hiniker Co.*, 150 F.3d 1362, 1369 (Fed. Cir. 1998)). First, a term’s context in the asserted claim can be instructive. *Phillips*, 415 F.3d at 1314. Other asserted or unasserted claims can also aid in determining the claim’s meaning, because claim terms are typically used consistently throughout the patent. *Id.* Differences among the claim terms can also assist in understanding a term’s meaning. *Id.* For example, when a dependent claim adds a limitation to an independent claim, it is presumed that the independent claim does not include the limitation. *Id.* at 1314–15.

“[C]laims ‘must be read in view of the specification, of which they are a part.’” *Id.* (quoting *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979 (Fed. Cir. 1995) (en banc)). “[T]he specification ‘is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.’” *Id.* (quoting *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)); *Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1325 (Fed. Cir. 2002). However, “[a]lthough the specification may aid the court in interpreting the meaning of disputed claim language, particular embodiments and examples appearing in the specification will not generally be read into the claims.” *Comark Commc’ns, Inc. v. Harris Corp.*, 156 F.3d 1182, 1187 (Fed. Cir. 1998) (quoting *Constant v. Advanced Micro-Devices, Inc.*, 848 F.2d 1560, 1571 (Fed. Cir. 1988)); *see also Phillips*, 415 F.3d at 1323.

A court should “avoid the danger of reading limitations from the specification into the claim[s].” *Phillips*, 415 F.3d at 1323. For example, “although the specification often describes very specific embodiments of the invention, [the Federal Circuit has] repeatedly warned against

confining the claims to those embodiments.” *Id.* The Federal Circuit has “expressly rejected the contention that if a patent describes only a single embodiment, the claims of the patent must be construed as being limited to that embodiment.” *Id.* This is not only because of the requirements of § 112 of the Patent Act, but also because “persons of ordinary skill in the art rarely would confine their definitions of terms to the exact representations depicted in the embodiments.” *Id.* Limitations from the specification should only be read into the claims if the patentee “acted as his own lexicographer and imbued the claim terms with a particular meaning or disavowed or disclaimed scope of coverage, by using words or expressions of manifest exclusion or restriction.” *E-Pass Techs., Inc. v. 3Com Corp.*, 343 F.3d 1364, 1369 (Fed. Cir. 2003) (citations omitted); *Thorner v. Sony Computer Entm’t Am. LLC*, 669 F.3d 1362, 1367 (Fed. Cir. 2012).

The prosecution history is another tool to supply the proper context for claim construction because, like the specification, the prosecution history provides evidence of how the PTO and the inventor understood the patent. *Phillips*, 415 F.3d at 1317. However, “because the prosecution history represents an ongoing negotiation between the PTO and the applicant, rather than the final product of that negotiation, it often lacks the clarity of the specification and thus is less useful for claim construction purposes.” *Id.* at 1318; *see also Athletic Alternatives, Inc. v. Prince Mfg.*, 73 F.3d 1573, 1580 (Fed. Cir. 1996) (ambiguous prosecution history may be “unhelpful as an interpretive resource”).

Although extrinsic evidence can also be useful, it is “less significant than the intrinsic record in determining the legally operative meaning of claim language.” *Phillips*, 415 F.3d at 1317 (quoting *C.R. Bard, Inc. v. U.S. Surgical Corp.*, 388 F.3d 858, 862 (Fed. Cir. 2004)). Technical dictionaries and treatises may help a court understand the underlying technology and the manner in which one skilled in the art might use claim terms, but technical dictionaries and

treatises may provide definitions that are too broad or may not be indicative of how the term is used in the patent. *Id.* at 1318. Similarly, expert testimony may aid a court in understanding the underlying technology and determining the particular meaning of a term in the pertinent field, but an expert's conclusory, unsupported assertions as to a term's definition are not helpful to a court. *Id.* Extrinsic evidence is "less reliable than the patent and its prosecution history in determining how to read claim terms." *Id.*

Many other principles of claim construction, though not addressed in *Phillips*, remain significant in guiding this Court's charge in claim construction. The Court is mindful that there is a "heavy presumption" in favor of construing claim language as it would be plainly understood by one of ordinary skill in the art. *Johnson Worldwide Assocs., Inc. v. Zebco Corp.*, 175 F.3d 985, 989 (Fed. Cir. 1999); *cf. Altiris, Inc., v. Symantec Corp.*, 318 F.3d 1364, 1372 (Fed. Cir. 2003) ("[S]imply because a phrase as a whole lacks a common meaning does not compel a court to abandon its quest for a common meaning and disregard the established meaning of the individual words."). The same terms in related patents are presumed to carry the same meaning. *See Omega Eng'g, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1334 (Fed. Cir. 2003) ("We presume, unless otherwise compelled, that the same claim term in the same patent or related patents carries the same construed meaning.") "Consistent use" of a claim term throughout the specification and prosecution history provides "context" that may be highly probative of meaning and may counsel against "[b]roadening of the ordinary meaning of a term in the absence of support in the intrinsic record indicating that such a broad meaning was intended" *Nystrom v. TREX Co.*, 424 F.3d 1136, 1143-46 (Fed. Cir. 2005).

Claim construction is not meant to change the scope of the claims but only to clarify their meaning. *Embrex, Inc. v. Serv. Eng'g Corp.*, 216 F.3d 1343, 1347 (Fed. Cir. 2000) ("In claim

construction the words of the claims are construed independent of the accused product, in light of the specification, the prosecution history, and the prior art. . . . The construction of claims is simply a way of elaborating the normally terse claim language[] in order to understand and explain, but not to change, the scope of the claims.”) (citations and internal quotations omitted). Regarding claim scope, the transitional term “comprising,” when used in claims, is inclusive or open-ended and “does not exclude additional, unrecited elements or method steps.” *CollegeNet, Inc. v. ApplyYourself, Inc.*, 418 F.3d 1225, 1235 (Fed. Cir. 2005) (citations omitted). Claim constructions that read out a preferred embodiment are rarely, if ever, correct. *Vitronics*, 90 F.3d at 1583-84.

B. Departing from the Ordinary Meaning of a Claim Term

While claim construction is a matter for the Court, it need not provide a new definition or rewrite a term, particularly when the Court finds the term’s plain and ordinary meaning is sufficient. There are “only two exceptions to [the] general rule” that claim terms are construed according to their plain and ordinary meaning: “1) when a patentee sets out a definition and acts as his own lexicographer, or 2) when the patentee disavows the full scope of the claim term either in the specification or during prosecution.”³ *Golden Bridge Tech., Inc. v. Apple Inc.*, 758 F.3d 1362, 1365 (Fed. Cir. 2014) (quoting *Thorner v. Sony Computer Entm’t Am. LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012)). *See also GE Lighting Solutions, LLC v. AgiLight, Inc.*, 750 F.3d 1304, 1309 (Fed. Cir. 2014) (“[T]he specification and prosecution history only compel departure from the plain meaning in two instances: lexicography and disavowal.”). The standards for finding lexicography or disavowal are “exacting.” *GE Lighting Solutions*, 750 F.3d at 1309.

³ Some cases have characterized other principles of claim construction as “exceptions” to the general rule, such as the statutory requirement that a means-plus-function term is construed to cover the corresponding structure disclosed in the specification. *See, e.g., CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1367 (Fed. Cir. 2002).

To act as his own lexicographer, the patentee must “clearly set forth a definition of the disputed claim term,” and “clearly express an intent to define the term.” *Id.* (quoting *Thorner*, 669 F.3d at 1365); *see also Renishaw*, 158 F.3d at 1249. The patentee’s lexicography must appear “with reasonable clarity, deliberateness, and precision.” *Renishaw*, 158 F.3d at 1249.

To disavow or disclaim the full scope of a claim term, the patentee’s statements in the specification or prosecution history must amount to a “clear and unmistakable” surrender. *Cordis Corp. v. Boston Sci. Corp.*, 561 F.3d 1319, 1329 (Fed. Cir. 2009); *see also Thorner*, 669 F.3d at 1366 (“The patentee may demonstrate intent to deviate from the ordinary and accustomed meaning of a claim term by including in the specification expressions of manifest exclusion or restriction, representing a clear disavowal of claim scope.”). “Where an applicant’s statements are amenable to multiple reasonable interpretations, they cannot be deemed clear and unmistakable.” *3M Innovative Props. Co. v. Tredegar Corp.*, 725 F.3d 1315, 1326 (Fed. Cir. 2013).

C. Claim differentiation

The doctrine of claim differentiation “is based on ‘the common sense notion that different words or phrases used in separate claims are presumed to indicate that the claims have different meanings and scope.’” *Karlin Tech. Inc. v. Surgical Dynamics, Inc.*, 177 F.3d 968, 971-72 (Fed. Cir. 1999). In the most specific sense, “claim differentiation” refers to the presumption that an independent claim should not be construed as requiring a limitation added by a dependent claim. *See Nazomi Commc’ns, Inc. v. Arm Holdings, PLC.*, 403 F.3d 1364, 1370 (Fed. Cir. 2005). However, the presumption of claim differentiation may be rebutted where the patent discloses only one embodiment, and that single embodiment is all the inventors conceived of. *Id.*

D. Functional Claiming and 35 U.S.C. § 112, ¶ 6 (pre-AIA) / § 112(f) (AIA)⁴

A patent claim may be expressed using functional language. *See* 35 U.S.C. § 112, ¶ 6; *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1347–49 & n.3 (Fed. Cir. 2015) (en banc in relevant portion). Section 112, ¶ 6 provides that a structure may be claimed as a “means . . . for performing a specified function” and that an act may be claimed as a “step for performing a specified function.” *Masco Corp. v. United States*, 303 F.3d 1316, 1326 (Fed. Cir. 2002).

However, § 112, ¶ 6 does not apply to all functional claim language. There is a rebuttable presumption that § 112, ¶ 6 applies when the claim language includes “means” or “step for” terms, and that it does not apply in the absence of those terms. *Masco Corp.*, 303 F.3d at 1326; *Williamson*, 792 F.3d at 1348. The presumption stands or falls according to whether one of ordinary skill in the art would understand the claim with the functional language, in the context of the entire specification, to denote sufficiently definite structure or acts for performing the function. *See Media Rights Techs., Inc. v. Capital One Fin. Corp.*, 800 F.3d 1366, 1372 (Fed. Cir. 2015) (§ 112, ¶ 6 does not apply when “the claim language, read in light of the specification, recites sufficiently definite structure” (quotation marks omitted) (citing *Williamson*, 792 F.3d at 1349; *Robert Bosch, LLC v. Snap-On Inc.*, 769 F.3d 1094, 1099 (Fed. Cir. 2014))); *Williamson*, 792 F.3d at 1349 (§ 112, ¶ 6 does not apply when “the words of the claim are understood by persons of ordinary skill in the art to have sufficiently definite meaning as the name for structure”); *Masco Corp.*, 303 F.3d at 1326 (§ 112, ¶ 6 does not apply when the claim includes an “act” corresponding to “how the function is performed”); *Personalized Media Commc’ns, L.L.C. v. Int’l Trade Comm’n*, 161 F.3d 696, 704 (Fed. Cir. 1998) (§ 112, ¶ 6 does not apply when the claim includes

⁴ The Court refers to the pre-AIA version of § 112 but understands that there is no substantial difference between functional claiming under the pre-AIA version and under the AIA version of the statute.

“sufficient structure, material, or acts within the claim itself to perform entirely the recited function . . . even if the claim uses the term ‘means.’” (quotation marks and citation omitted)).

When it applies, § 112, ¶ 6 limits the scope of the functional term “to only the structure, materials, or acts described in the specification as corresponding to the claimed function and equivalents thereof.” *Williamson*, 792 F.3d at 1347. Construing a means-plus-function limitation involves multiple steps. “The first step . . . is a determination of the function of the means-plus-function limitation.” *Medtronic, Inc. v. Advanced Cardiovascular Sys., Inc.*, 248 F.3d 1303, 1311 (Fed. Cir. 2001). “[T]he next step is to determine the corresponding structure disclosed in the specification and equivalents thereof.” *Id.* A “structure disclosed in the specification is ‘corresponding’ structure only if the specification or prosecution history clearly links or associates that structure to the function recited in the claim.” *Id.* The focus of the “corresponding structure” inquiry is not merely whether a structure is capable of performing the recited function, but rather whether the corresponding structure is “clearly linked or associated with the [recited] function.” *Id.* The corresponding structure “must include all structure that actually performs the recited function.” *Default Proof Credit Card Sys. v. Home Depot U.S.A., Inc.*, 412 F.3d 1291, 1298 (Fed. Cir. 2005). However, § 112 does not permit “incorporation of structure from the written description beyond that necessary to perform the claimed function.” *Micro Chem., Inc. v. Great Plains Chem. Co.*, 194 F.3d 1250, 1258 (Fed. Cir. 1999).

E. Definiteness Under 35 U.S.C. § 112, ¶ 2 (pre-AIA) / § 112(b) (AIA)

Patent claims must particularly point out and distinctly claim the subject matter regarded as the invention. 35 U.S.C. § 112, ¶ 2. A claim, when viewed in light of the intrinsic evidence, must “inform those skilled in the art about the scope of the invention with reasonable certainty.” *Nautilus Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120, 2129 (2014). If it does not, the claim

fails § 112, ¶ 2 and is therefore invalid as indefinite. *Id.* at 2124. Whether a claim is indefinite is determined from the perspective of one of ordinary skill in the art as of the time the application for the patent was filed. *Id.* at 2130. As it is a challenge to the validity of a patent, the failure of any claim in suit to comply with § 112 must be shown by clear and convincing evidence. *Id.* at 2130 n.10. “[I]ndefiniteness is a question of law and in effect part of claim construction.” *ePlus, Inc. v. Lawson Software, Inc.*, 700 F.3d 509, 517 (Fed. Cir. 2012).

When a term of degree is used in a claim, “the court must determine whether the patent provides some standard for measuring that degree.” *Biosig Instruments, Inc. v. Nautilus, Inc.*, 783 F.3d 1374, 1378 (Fed. Cir. 2015) (quotation marks omitted). Likewise, when a subjective term is used in a claim, “the court must determine whether the patent’s specification supplies some standard for measuring the scope of the [term].” *Datamize, LLC v. Plumtree Software, Inc.*, 417 F.3d 1342, 1351 (Fed. Cir. 2005); *accord Interval Licensing LLC v. AOL, Inc.*, 766 F.3d 1364, 1371 (Fed. Cir. 2014) (citing *Datamize*, 417 F.3d at 1351).

F. Person of ordinary skill in the art and Danco’s objections to Dr. Klopp

Danco asserts a person of ordinary skill in the art of the ‘620 and 687 Patents would typically have had (a) a bachelor’s degree in mechanical engineering, or a related field, and two years of experience in the design of plumbing components; or (b) a high school degree and four years of experience in the design of plumbing components. *See* Declaration of Chad H. Jones at ¶ 25, attached as Ex. I to Dkt. No. 88 (“Jones Decl.”). A person of ordinary skill in the art “would also know and be aware of the applicable related engineering standards, such as, for instance, the following ASME standards: (1) “Dual Flush Devices for Water Closets,” ASME A112.19.10-1994; (2) “Plumbing Fixture Fittings,” ASME A112.18.1M-1996; (3) “Vitreous China Plumbing Fixtures,” ASME A112.19.2M-1998; and (4) “Trim for Water-Closet Bowls, Tanks, and Urinals.”

ASME A112.19.5.1999.” *Id.* According to Danco, Fluidmaster stated in each of its IPR petitions—and Danco and the PTO agree—that a person of ordinary skill in the art of the inventions of the ‘620 and ‘687 Patents would have (1) a bachelor of science in mechanical engineering, or an equivalent education and (2) several years of experience working in the design of plumbing systems. (Ex. L at 7) (Ex. S at 5) (Ex. Y at 9-10).

According to Danco, while Fluidmaster’s purported expert, Dr. Richard Klopp, is highly educated and appears to have extensive experience in failure analysis of materials, he fails to have this requisite experience in the design of plumbing systems. (Ex. X at 27:18-28:9) (Ex. W at ¶ 3). Danco asserts Dr. Klopp is not a person of ordinary skill even under Fluidmaster’s definition of a person of ordinary skill in the art, and his opinion regarding what a person of ordinary skill in the art would understand is entitled to very little, if any, weight. *See, e.g., Sloan Valve Co. v. Zurn Indus., LLC*, Case No. 10-cv-00204, 2013 U.S. Dist. LEXIS 163379, at *25 (N.D. Ill. Nov. 18, 2013) (excluding opinions on perspective of a POSITA of dual flush toilet technology, where “highly educated” expert nevertheless lacked the requisite experience in the design of plumbing systems). According to Danco, the unreliability of Dr. Klopp’s opinions is exemplified in his inability to identify several basic toilet components that would be well-known to a person of ordinary skill in the art. *See* Deposition of Richard W. Klopp, Ph.D., P.E. at 59:13-60:13, attached as Ex. X to Dkt. No. 93 (“Klopp Dep.”); *see also* Supplemental Declaration of Chad H. Jones at ¶¶ 4-10, attached as Ex. W to Dkt. No. 93 (“Supp. Jones Decl.”).

Danco contends Dr. Klopp’s opinions should be considered with high skepticism for another reason. A fundamental tenet of claim construction is that “claims may not be construed by reference to the accused device.” *SRI Int’l v. Matsushita Elec. Corp.*, 775 F.2d 1107, 1118 (Fed. Cir. 1985) (en banc)). According to Danco, despite this explicit prohibition, Dr. Klopp admitted

he obtained an accused Fluidmaster device and used it as “foundation” for his claim construction opinions. (Ex. X at 188:22-189:1). Danco asserts Dr. Klopp “used his knowledge of the accused device to form results-based opinions in an attempt to urge the Court to incorrectly construe the disputed claim terms and phrases in a way that would skirt infringement.” (Dkt. No. 93 at 2).

The Court is not persuaded. Having considered Dr. Klopp’s deposition testimony, the Court agrees with Fluidmaster that a “fair reading of [the transcript] shows that [Dr. Klopp] had not analyzed the accused product in detail, had not performed an infringement analysis on the product, and that the product did not provide him understanding of particular terms.” Docket Entry # 99 at 9 (emphasis removed). Regarding Danco’s reliance on Fluidmaster’s characterization of the proposed level of ordinary skill in the art provided in the IPR, the Court further notes that throughout Fluidmaster’s claim construction briefing Fluidmaster asserts the IPR proceeding is not binding on the litigation.

According to Fluidmaster, unlike actions in federal court, the PTAB applies a “broadest reasonable construction” standard in considering IPR petitions. *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2136 (2016) (citing 37 C.F.R. §42.100(b)). This results in the possibility that PTAB and district court findings differ, but the Supreme Court “has recognize[d] that that is so.” *Id.* at 2146. IPR petitions are authorized on only limited statutory bases and in consideration of only certain types of prior art. *See* 35 USC § 311(b). Therefore, according to Fluidmaster, a defendant’s assertion of differing theories in an infringement action (such as §112 indefiniteness arguments, §112(6) MPF arguments, different proposed constructions, or additional invalidity theories) as compared to that party’s IPR petition is not problematic given “the possibility of inconsistent results [is] inherent to Congress’ regulatory design.” *Id.* In light of the above, the IPR petitions and the recent decisions regarding institution have no legal impact on claim construction.

THX, Ltd. v. Apple, Inc., 2016 U.S. Dist. LEXIS 153557, at *13 (N.D. Cal. Nov. 4, 2016)(“Apple conceded at the claim construction hearing that the Court is not bound by PTAB’s construction.”).

In support of Fluidmaser’s responsive claim construction brief, Dr. Klopp declared that a POSITA “is a person with at least a two-year degree in the mechanical arts who is familiar with toilets, flush valves, and gaskets, or a similar non-degreed individual with the equivalent training gained through experience.” (Klopp Decl. of Responsive Brief at 4). In his Declaration in reply to Danco’s reply brief, Dr. Klopp asserts, by virtue of his training and experience, he also meets Danco’s definition of a person of ordinary skill in the art. (Klopp Decl. of Surreply Brief at 2). Dr. Klopp states he had a bachelor of science degree in mechanical engineering in 2009, and by 2009 he had worked in the design of plumbing systems, including analysis of the design of the plumbing system at the Brickyard condominium development in San Jose, California and the analysis of the design of the plumbing system at the St. Regis Hotel and Condominiums in downtown San Francisco. *Id.* at 2-3. Dr. Klopp states he has also actually designed plumbing systems. *Id.* at 4. Finally, Dr. Klopp states he is sufficiently familiar with the relevant ASME standards to have worked in the design of plumbing systems and analyzed the failure of plumbing components. *Id.*

Danco’s argument that Dr. Klopp lacks sufficient experience in the design of plumbing systems is without merit. The Court finds Dr. Klopp’s experience satisfies both sides’ definitions of a person of ordinary skill in the art.

The Court now directs its attention to the patents-in-suit and the disputed claim terms.

IV. CONSTRUCTION OF CLAIM TERMS IDENTIFIED BY BOTH PARTIES

A. “detachably attached” (‘620 Patent: Claims 1, 4)

Danco’s Proposed Construction	Fluidmaster’s Proposed Construction
“removably retained”	“designed for direct separation and direct reattachment without degradation (referring to gasket)”

(1) The Parties’ Positions

Danco contends “detachably attached” should be given its plain and ordinary meaning, which is “removably retained”—a phrase that would be readily understood by a lay juror. According to Danco, when an object is “attached” to something, the object is “retained.” (Ex. J)(defining “attach” as “make fast or join”). Danco further asserts something that is “detachable” is “removable.” (Ex. K)(defining “detach” as “to separate”).

In response, Fluidmaster contends “detachably attached” should be construed as “designed for direct separation and direct reattachment without degradation.” According to Fluidmaster, Danco proposes a construction of “removably retained,” which is supported by its expert Chad Jones, but the proposal merely trades equally vague and unsupported synonyms for “detachably attached” without providing any clarity as to what the phrase means. Fluidmaster further asserts the prosecution history reveals that “detachably” was a term added to overcome prior art. (Ex. 24 at 77:16-19).

(2) Analysis

The ‘620 Patent uses the phrase “detachably attached” in two places. Claim 1 describes a flush mechanism and a gasket, with the gasket being “detachably attached to the flush mechanism. . . .” ‘620 Patent at 13:35. Claim 4 depends from Claim 1 and describes an “adaptor” (which is a claimed component of the flush mechanism) configured to “detachably attach to the dual flush

mechanism. . . .” The term “detachably” does not appear anywhere in the written specification. Rather, the specification merely provides that “attached to the adapter 133 is a gasket 139. . . ,” “the gasket 139 is attached to the bottom of the adapter 133. . . ,” “FIG 7A [] is a cutaway view of the adapter 133 with the gasket 139 attached thereto.” (‘620 Patent, 2:50, 2:54, 6:28-29).

The differences in the parties’ proposed constructions are (1) whether attachment must be “direct;” (2) whether the gasket must be re-attachable; and (3) whether the removal can result in degradation.

Danco asserts this phrase does not require direct attachment. Fluidmaster argues the construction would violate the doctrine of claim differentiation if it does not require direct separation/reattachment. According to Fluidmaster, direct connection is required in Claim 1 because Claim 4 includes the additional element of an “adaptor” being a component of the dual flush mechanism. Specifically, Claim 4 provides as follows:

4. The apparatus of claim 2, wherein the dual flush mechanism further comprises an adaptor configured to detachably attach to the dual flush mechanism, where the gasket is attached to the adaptor.

(‘620 Patent, 13:49-52).

Fluidmaster contends that if the adaptor were a separate component (e.g., creating an indirect relationship), then the gasket would no longer be detachably attached to the flush mechanism. Fluidmaster further asserts Claim 4 requires the adaptor is “configured to detachably attach to the dual flush mechanism, where the gasket is attached to the adaptor.” According to Fluidmaster, understanding all limitations of the gasket as required by Claim 4 (including Claims 1 and 2) is instructive to understand detachably attached.

The ‘620 Patent depicts its exemplary gasket (139) in FIG. 6A:

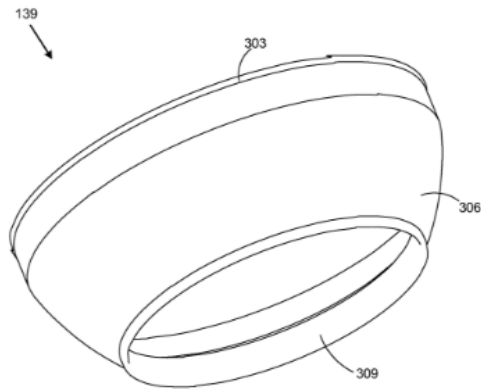


FIG. 6A

This gasket, as shown in the '620 Patent, connects the flush mechanism to the flush orifice, and is detachably attached to the flush mechanism. FIG. 1C shows an example of gasket 139 being detachably attached to a flush mechanism via adaptor 133:

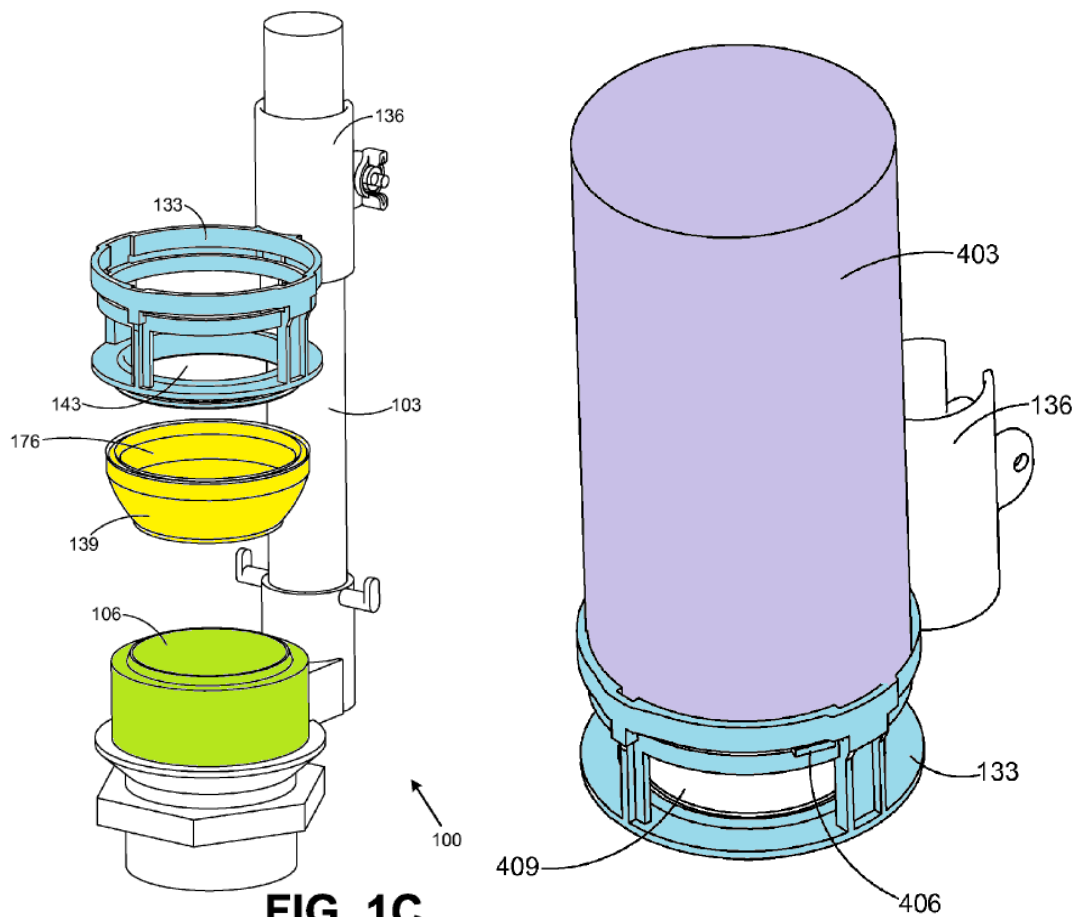


FIG. 1C

On the other hand, Danco asserts its proposed construction of “detachably attached” is consistent with the specification of the ‘620 Patent, which discloses at least one embodiment in which a gasket is detachably attached to a flush mechanism indirectly via an adapter. According to Danco, the ‘620 Patent discloses (as in Claim 4) a resilient rubber domed gasket which, through its inward annular projection, connects to an adapter 133 having annular recesses 173. (*See* FIG 7A). Whereas Figure 7A of the ‘620 Patent illustrates a cross-section of the gasket 139 attached to the adapter 133, Figure 9A illustrates how the adapter can detachably attach to a dual flush canister 403. Figure 7A shows the gasket 139 (blue) can be attached to the adapter 133 (red) using “a pointed end of the inward annular projection 176” that “fits into the pointed annular recess 253” of the adapter 133. (‘620 Patent at 6:31-34). According to Danco, the gasket 139 is thereby attached, or *retained*, to the adapter 133.

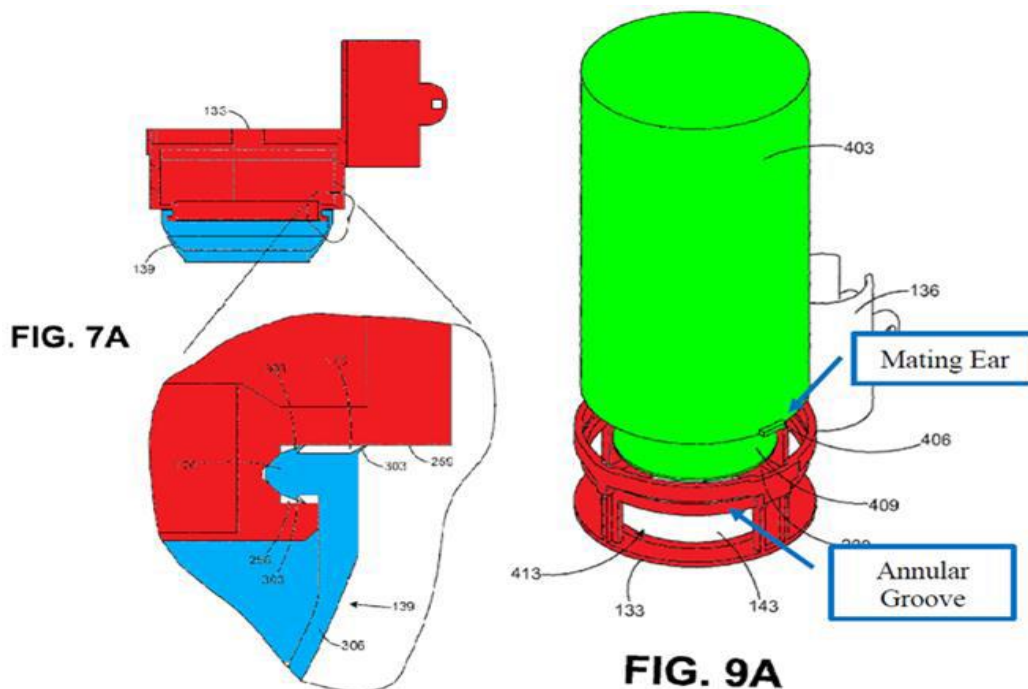


Figure 9A above shows that mating ears 406 of the dual flush canister 403 (green) can be slid down into the grooves 233 of the adapter 133 and then rotated so that the mating ears 406 rotate within an annular groove in the adapter 133. (‘620 Patent at 3:62-4:7). In this way, the adapter 133 can be attached to the dual flush canister 403. To detach the adapter 133 from the dual flush canister 403, the process of sliding and rotating the mating ears 406 can be reversed so that the adapter 133 can be separated from the dual flush canister 403. (*See id.*). According to Danco, because the gasket 139 can be attached to the dual flush canister 403 via the detachable adapter 133, the gasket 133 is thus detachably attached—or removably retained—to the dual flush canister 403.

According to Fluidmaster, through Claim 4, the gasket must be attached to the adaptor and the flush mechanism while simultaneously forming a seal between the flush mechanism and the flush orifice. If indirect attachment were within the scope of either of the claims, then it would mean that the adaptor was a separate component from the flush mechanism, and not part of it. (Klopp. Decl. of Responsive Brief at 13). Because Claim 4 has specifically required that the “mechanism further comprises an adaptor,” Fluidmaster asserts “detachably attached to...” in Claims 1 and 4 can only be read consistently if such term means *direct* connection between the objects.

The Court is not convinced construing “detachably attached to...” as inclusive of indirect association would violate principles of claim differentiation as urged by Fluidmaster. And even if dependent Claim 4 requires direct attachment, Danco insists that Claim 1 must necessarily be broader than Claim 4 and include indirect attachment because “[a]n independent claim impliedly embraces more subject matter than its narrower dependent claim.” *Intamin, Ltd. v. Magnetar Techs., Corp.*, 483 F.3d 1328, 1335 (Fed. Cir. 2007). The Court agrees.

The Court finds Fluidmaster's requirement that the gasket be "designed for *direct* separation and *direct* reattachment" is improper, as it adds limitations not necessary under the plain and ordinary meaning of the claim language. The plain language of the phrase detachably attached does not require the attachment to be direct.

At the hearing, the Court proposed the following: "designed for separation." The Court prefers this construction to Danco's proposed construction of "removably retained." "Designed for separation" eliminates the "direct" and "without degradation" aspects of Fluidmaster's proposal, while at the same time taking care of Fluidmaster's objections that nearly anything can be removed with enough force and that a person of ordinary skill in the art would conclude that "detachable" means that something may be detached and attached without damage or degradation.⁵

Fluidmaster contends a person of ordinary skill in the art would read "detachably attached" in Claim 1 as referring to a gasket which can be repeatedly removed and attached directly to the flush mechanism. (Klopp. Decl. 10-11). However, the claims do not require a gasket that must be re-attachable. Moreover, there is nothing in the claim language, specification, or prosecution history of the '620 Patent that would require the gasket to be non-degradable.

Fluidmaster argues re-attachability is required in view of the prosecution history. According to Fluidmaster, merely being capable of removal, as urged by Danco in its proposed construction, is the same rationale advanced by the PTO and against which Danco argued. Fluidmaster further asserts Danco added the term "detachably" to overcome Pipenburg and

⁵ Fluidmaster asserts an object must have been designed or intended for removal and reuse to be "detachably attached." Fluidmaster relies on the dictionary definition, which calls for separation "without loss or damage." (Ex. 21, p. 11). However, Fluidmaster acknowledges degradable gaskets such as wax rings exist in the toilet industry. (Dkt. No. 99 at 10). Fluidmaster asserts this does not mean "such are those mandated by the patent claims." *Id.* As explained above, the Court does not find the patent claims mandate re-attachability.

specifically argued that “detachably” is not an inherent characteristic of being “attached.” (Ex. 12 at 2). In distinguishing the bottom surface of bottom valve 10 of Pipenburg from the “detachably attached” gasket of the ‘620 Patent, Danco argued “Pipenburg appears to disclose that bottom valve 10 is molded with the bottom surface” and thus is not detachable. (Ex. 14 at 10). According to Fluidmaster, Danco further argued Pipenburg did not teach or suggest a detachable gasket because the bottom valve and the adapter were one in the same. In light of the prosecution history, Fluidmaster asserts the phrase “detachably attached” must mean something different than merely “attached” and may not be an inherent function of being attached.

However, as urged by Danco, the ‘620 Patent applicant argued that components in Pipenburg were not detachably attached because they were “fixed.” The prosecution history does not mandate that re-attachability is required.

The Court accordingly construes “**detachably attached**” to mean “**designed for separation.**”

B. “flush valve” (‘620 Patent: Claims 1, 21; ‘687 Patent: Claims 4, 14)

Danco’s Proposed Construction	Fluidmaster’s Proposed Construction
“a valve located at the bottom of a toilet tank used to discharge water from the toilet tank to a toilet bowl ”	“valve which uses a sealing member to ensure water does not leak into the toilet bowl until a flush is initiated ”

(1) The Parties’ Positions

Danco argues “flush valve” is a term of art having specialized meaning to a person of ordinary skill in the art. According to Danco, to such a person, the phrase flush valve means “a valve located at the bottom of a toilet tank used to discharge water from the toilet tank to a toilet bowl.” Danco asserts the Court can look to the guidance provided by the American Society of Mechanical Engineers (“ASME”)—a professional engineering organization that develops

authoritative standards for the plumbing industry. (Ex. I at ¶¶ 36-37) (Ex. L at 7). Specifically, ASME publishes at least two standards that expressly define the phrase flush valve as the following: “a special form of valve located at the bottom of a flush tank used to discharge the water closet or urinal.” (Ex. M at 8) (Ex. N at 11). According to Danco, ASME’s definition of flush valve is consistent with, and almost identical to, Danco’s construction of this phrase. Danco argues the patents-in-suit use the phrase flush valve consistent with Danco’s construction and the ASME’s definition. Danco further argues each embodiment of a flush valve disclosed in the patents-in-suit is a valve located at the bottom of a toilet tank used to discharge water from the toilet tank to a toilet bowl. (Jones Decl. at ¶ 37).

In its response, Fluidmaster asserts Danco’s proposed construction unnecessarily resorts to extrinsic evidence to import a needless limitation (“located at the bottom of the toilet tank”) which is inconsistent with its original disclosure and manifestation of intent. According to Fluidmaster, the phrase should be construed as specially defined in the specification, which provides “the flush valves as described herein are those that are configured to seat a flapper, flush ball, gasket, or other sealing member to ensure that water does not leak into the toilet bowl.” (‘620 Patent, 2:31-35). Fluidmaster does not contest that a flush valve may be located at the bottom of the tank, or even that it often is. However, according to Fluidmaster, a person of ordinary skill in the art would not limit the location of a flush valve to the bottom of a toilet tank.

(2) Analysis

There are two main differences in the parties’ proposed constructions: (1) whether a flush valve is located at the bottom of the toilet tank, as proposed by Danco; and (2) whether a flush valve requires the presence of a sealing member, as proposed by Fluidmaster.

On one hand, Danco asserts its proposed construction of flush valve is consistent with the understanding of a person of ordinary skill in the art, the specifications of the patents-in-suit, the ASME standards that Fluidmaster requires a person of ordinary skill in the art to know, and Fluidmaster's own teachings regarding flush valves. On the other hand, Fluidmaster asserts the inventors of the patents-in-suit have acted as their own lexicographers; thus, the phrase flush valve should be construed as specially defined in the specification, which provides "the flush valves as described herein are those that are configured to seat a flapper, flush ball, gasket, or other sealing member to ensure that water does not leak into the toilet bowl." ('620 Patent, 2:31-35).

Regarding the first issue, Fluidmaster argues Danco and its expert import the "at the bottom of the tank" limitation from the 1998 ASME standard, which Fluidmaster asserts was obsolete by the time of the invention. Fluidmaster contends non-bottom flush valve configurations were well known in the field by the time of the invention. According to Dr. Klopp, the 2003 ASME definition of flush valve more accurately reflects this broader understanding. There, flush valve is defined as "a special form of valve used to discharge the water from the tank into a water closet or urinal." (Klopp Decl. of Responsive Brief at 16).

Fluidmaster states a person of ordinary skill in the art would not limit the location of a flush valve to the bottom of a toilet tank and argues, at the time of the invention, it was well known that flush valves could be positioned at locations within a toilet tank other than the bottom. For example, Dr. Klopp states both Smolinski and Clark show flush valves mounted in the middle of the tank. (Klopp Decl. of Responsive Brief at 15-16) (Ex. 9-10). However, according to Danco, Dr. Klopp testified the Smolinski and Clark references do not refer to the identified components as a "flush valve." (Ex. X at 145:11-20, 151:6-11) (Dkt. No. 92-8 at 2:46 (referring to "upper valve closure 24"))(Dkt. No. 92-10 at 2:40-51 (referring to "cover float 42" and "flange 46"))).

Even though it may have been known at the time of the invention that flush valves could be positioned at locations within a toilet tank other than the bottom, when describing a flush valve, the specifications of the patents-in-suit state a flush valve is “secure[d] to the bottom of a toilet tank.” (‘620 Patent at 2:38-40). The specification further provides “[t]he flush valve 100 is generally employed in gravity toilets and includes an orifice 106 through which water drains into a toilet bowl during a flush of a toilet as can be appreciated.” (‘620 Patent at 2:24-26).

Additionally, as pointed out by Danco, Fluidmaster’s own product literature and patents demonstrate a person of ordinary skill in the art’s understanding of this claim phrase would be “a valve located at the bottom of a toilet tank” Danco asserts Fluidmaster’s U.S. Patent No. 8,250,681 teaches that the flush valve 8 illustrated below is a valve located at the bottom of the toilet tank used to discharge water from the toilet tank to a toilet bowl. (Ex. O at Fig. 1). Fluidmaster’s patent further states “[a] water discharge aperture 7 . . . is formed *in the bottom 3 of the tank 1*. The discharge aperture 7 is fitted with a flush valve 8 for discharging water from a tank to flush a toilet bowl” *Id.* at 3:11-14 (emphasis added).

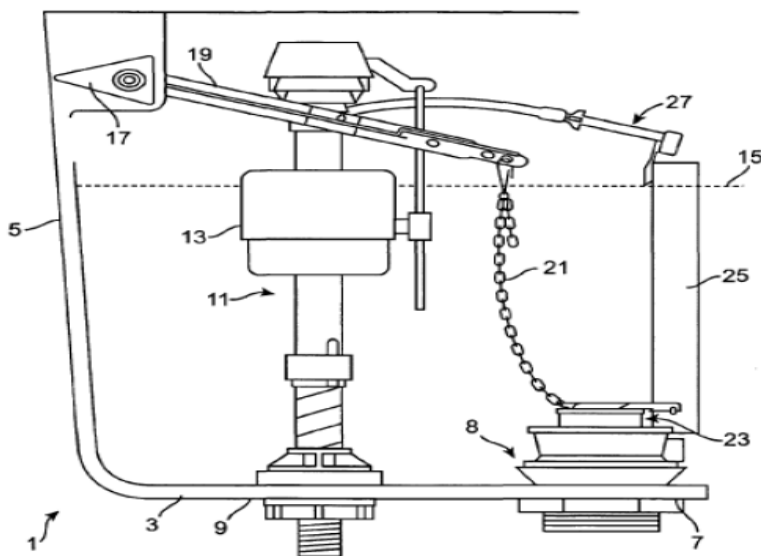


FIG. 1

Fluidmaster also provides a web page titled “Flush Valves,” explaining that “[t]oilet flush valves control the release of water from the tank to the bowl” (Ex. P). According to Danco, Fluidmaster’s web page includes an illustration of a flush valve, which is clearly located at the bottom of the toilet tank. *Id.* at 1. Finally, Dr. Klopp acknowledged during his deposition that in 2008—one year before the 2009 date of invention for the Patents-in-Suit—the ASME redefined flush valve as “[a] special form of valve located at the bottom of the flush tank used to control the discharge of water from the tank into a water closet or urinal.” (Ex X at 153:22-154:13).

The Court finds support in the specification for Danco’s proposal of the flush valve being located at the bottom of the toilet tank. The Court now considers whether the valve must use “a sealing member to ensure water does not leak into the toilet bowl until a flush is initiated” as proposed by Fluidmaster. According to Danco, this proposal is without support in either the intrinsic or extrinsic record. While Fluidmaster contends a flush valve without a sealing member would not be a valve, because all valves supposedly require a seal, Danco refers to Dr. Klopp’s testimony that a valve does not need a sealing member because it is well known that valves generally do not need to stop the flow of a fluid. (Ex. X at 127:23-25).

Dr. Klopp acknowledged that a valve is simply a device that controls the flow of fluid. (Ex. X at 126:25-127:4). However, according to Fluidmaster, his discussion of general valves “still makes clear that the absence of sealing members is only appropriate for applications where such valves are intended *not* to fully close or seal shut (e.g. metering, throttling, or governing valves), which is obviously not the case in a flush valve which is needed to prevent the unwanted flow of water from a toilet tank to a bowl.” (Dkt. No. 99 at 9). Chad Jones testified that a flush valve does not require a sealing member, stating it is a “valve to direct the flow of water.” (Ex. V at 66:17-23).

The Court finds Fluidmaster’s construction improper because it requires a “sealing member” to be physically present on the flush valve. Fluidmaster’s added sealing member requirement conflicts with at least the language of Claim 1 of the ‘620 Patent, which specifically states “the flush valve is *configured* to seat a sealing member.” ‘620 Patent at 13:39-40) (emphasis added). Thus, while the claim calls for the flush valve to be merely “configured” to seat a sealing member (and not necessarily actually present), Fluidmaster’s construction adds a further limitation that the sealing member be actually installed.

The Court accordingly hereby construes **“flush valve”** to mean **“a valve located at the bottom of a toilet tank used to discharge water from the toilet tank to a toilet bowl.”**

C. “dual flush canister” (‘620 Patent: Claims 1, 6, 11, 14; ‘687 Patent: Claims 4, 7, 9, 14, 17, 19, 20)

Danco’s Proposed Construction	Fluidmaster’s Proposed Construction
“cylindrical-shaped device providing for two flush volumes”	“a dual flush mechanism having at least a partially cylindrical shape”

(1) The Parties’ Positions

Danco argues the phrase “dual flush canister” means a “cylindrical-shaped device for providing for two flush volumes.” Fluidmaster asserts Danco’s proposed construction conflicts with the embodiments of the patents-in-suit and injects additional ambiguity which would be unhelpful to either an infringement or validity determination.

(2) Analysis

The significant difference between the parties’ constructions revolves around the meaning of the word “canister” and whether a person of ordinary skill in the art would understand it to mean a “cylindrical-shaped device” (Danco’s construction) or a device “having at least a partially cylindrical shape.” (Fluidmaster’s construction).

Fluidmaster argues the patents-in-suit mention a “canister”—essentially as a black-box serving as a placeholder through which other components connect – “FIGS. 9A-B are drawings that illustrate the coupling of a dual flush canister to the dual flush adaptor. . . .” (‘620 Patent at 1:59-60). However, according to Fluidmaster, neither the claims nor the specification clearly describe the nature of a dual flush canister. Fluidmaster argues Danco’s use of “cylindrical-shaped” creates additional confusion. Does Danco’s proposed construction mean that partially-cylindrical shapes, such as oblongs or ovals, be excluded from the claim scope of “canister?” According to Fluidmaster, such a conclusion would conflict with the specification, which clearly discloses structures which are at least only partially cylindrical. (‘620 Patent, Fig. 22B) (Klopp Decl. at Responsive Brief 21-22) (Ex. 24 86:15-87:3)(Mr. Jones referring to Fig. 22B as “generally cylindrical.”). Fluidmaster argues something that “looks like a can” and/or “has a cylindrical shape” falls within its proposal of “at least a partially cylindrical shape.”

Chad Jones opines a person of ordinary skill in the art would recognize that a canister has a specialized meaning of being generally cylindrical, or looking like a can having cylindrical shape. Similarly, Dr. Klopp testified it “really has to have a significant cylindrical aspect to it.” (Ex. X at 186:3-4). When asked if it would be more accurate to rephrase Fluidmaster’s construction to say “a dual flush mechanism having a significant cylindrical aspect,” Dr. Klopp stated “or material.” *Id.* at 186:5-12. He testified that “generally cylindrical” might be okay. *Id.* at 186:13-15.

According to Danco, under Fluidmaster’s construction, virtually any dual flush mechanism would constitute a “dual flush canister,” as long as it included some feature that was cylindrically-shaped. For its proposed construction, Danco relies on Mr. Jones’ declaration, wherein he states a person of ordinary skill in the art would recognize canister as being generally cylindrical. (Jones Decl. at ¶¶ 40-41). According to Danco, to the extent there is any doubt that a person of ordinary

skill in the art would understand dual flush canister to mean a cylindrical device as proposed by Danco, the Court should consider the declaration of Steven E. Maple—the purported expert Fluidmaster relied upon for its two IPR petitions. (Ex. Q at ¶¶ 51, 55) (Ex. R at ¶ 82).

Mr. Maple testified that he was Fluidmaster’s Vice President of Engineering and Quality from 1994-2007, that he was co-chairman of the Flushing Devices Committee for the Plumbing Manufacturers Institute (PMI) from 2004-2007, and that he developed several ASME standards. (Exs. Q and R at ¶¶ 8-15). Mr. Maple states in his declaration that a person of ordinary skill in the art would know a canister is something that “looks like a can” and that a can “has a cylindrical shape.” *Id.* at ¶ 51.

The Court rejects Fluidmaster’s proposed construction but will add the word “generally” to Danco’s proposal. The Court construes **“dual flush canister”** to mean **“generally cylindrical-shaped mechanism providing for two flush volumes.”**

V. CLAIM TERMS IDENTIFIED BY FLUIDMASTER AS NEEDING CONSTRUCTION

A. “gasket” (‘620 Patent: Claims 1, 2, 4, 21)

Danoc’s Proposed Construction	Fluidmaster’s Proposed Construction
<p>No construction needed; plain and ordinary meaning.</p> <p>Or, if construed: “a rubber ring, for placing around a joint to make it watertight”</p>	<p>“a non-adhesive object that creates a fluid seal which is maintained by compressive resilience.”</p>

(1) The Parties’ Positions

Danco argues the term “gasket” requires no construction. If construed, Danco proposes “a rubber ring, for placing around a joint to make it watertight.” Fluidmaster argues this term, without proper construction, is vague and includes meanings incongruous with the patents-in-suit.

Fluidmaster proposes a construction of “a non-adhesive object that creates a fluid seal which is maintained by compressive resilience.”

(2) Analysis

The ‘620 Patent uses gasket in the independent claims to identify its location and use for sealing. However, according to Fluidmaster, dependent Claims 13, 15, 17, and 18 describe the gasket as optionally having additional features such as “a sidewall,” “a pseudo-I beam,” “inward annular projections,” “a thinner portion” at one location, a “thicker portion” at another location, and “configured to deform at the thinner portion when the gasket is compressed against the flush orifice of the flush valve.” (‘620 Patent at 5:37-45, 14:9-35). Fluidmaster argues Danco’s proposed ordinary meaning attempts to include any “amorphous sealing material” and thus would be inconsistent with the additional limitations found in the dependent claims. Fluidmaster contends its proposed construction provides scope for gasket so as to mean something different than the term “sealing material,” but it does not unduly narrow the scope of the term by incorporating the limitations found in the dependent claims.

Regarding whether the construction of gasket should include a “non-adhesive” limitation, Danco asserts the purpose of a gasket is to seal and whether it is non-adhesive is irrelevant. According to Danco, adhesive gaskets are commercially available, and it is unduly limiting to require that the gasket be non-adhesive. Turning to the issue of whether the gasket should include a limitation that it be “maintained by compressive resilience,” nowhere does the specification say the gasket has to be resilient. According to Fluidmaster, the ‘620 Patent focuses on compressive resilience because use of the adapter calls for an individual to “press the adapter downward such that the gasket 139 mates properly with the flush orifice 106 and seals the junction therebetween.” (‘620 Patent at 3:27). Fluidmaster asserts this is reinforced by the embodiment in which the gasket

sidewall includes a “thinner portion” which allows “this area to deform.” *Id.* at 5:42-43. FIG. 8 “is another example. . . in which the gasket 139/539 is deformed due to compression down onto the flush orifice 206.... Due to the fact that the sidewall 306/506 is designed with a degree of compliance, the deformity 333 can occur while still allowing the gasket 139/539 to seal with the flush orifice 206.” *Id.* at 6:51-60.

According to Fluidmaster, the ‘620 Patent distinguishes the gasket subject of the invention to other sealing materials which have adhesive properties, stating for example that flanges 613 and 614 facilitate coupling of the adapter fittings 603 and 604 “using appropriate bonding sealants.” *Id.* at 7:37-43. (Klopp Decl. of Responsive Brief at 5). These compounds are described as serving to seal the junction between a flange and a flush orifice. *Id.* The ‘620 Patent specifies that such sealants may comprise “epoxy, silicone, various adhesives, or other compounds.” (‘620 Patent at 7:44-45). The ‘620 Patent teaches that these materials are different from, and “may eliminate the need” for a gasket. *Id.* at 7:49-53.

The Court rejects Fluidmaster’s proposed construction as unduly limiting. In his deposition, Dr. Klopp agreed that he would expect a gasket to be: (1) rubber, (2) having some ring-like aspect, (3) circular in nature, and (4) watertight when properly installed. (Ex. X at 95:21 - 97:13). Dr. Klopp did not add that he would expect such a gasket to be “non-adhesive” or that it would be “maintained by compressive resilience,” which are included in Fluidmaster’s proposed construction.

Dr. Klopp relies on exemplary embodiments in the ‘620 Patent to limit the gasket to be non-adhesive. However, Dr. Klopp testified a gasket can have adhesive properties and also a side wall. *Id.* at 65:11-12, 16-18, 92:22-93:1. When asked specifically about a wax gasket, Dr. Klopp stated he would consider them to be adhesive, stating “they are sticky.” *Id.* at 88:8-14. He also

acknowledges a gasket for a toilet could be compressive but not resilient, which further contradicts Fluidmaster’s proposed construction. *Id.* at 89:3-6, 12-14; 90:8-12.

Finally, the Court is not convinced the prosecution history supports Fluidmaster’s proposed construction.⁶

The Court accordingly hereby construes “gasket” as “**a rubber ring, for placing around a joint to make it watertight.**”

B. “adaptor” / “adapter” (‘620 Patent: Claims 4, 11, 12, 21; ‘687 Patent: Claim 14)

Danco’s Proposed Construction	Fluidmaster’s Proposed Construction
No construction needed; plain and ordinary meaning. Or, if construed: “a connector for joining parts”	“any of various devices used in adjusting or fitting to each other the separate parts of a machine or apparatus whose design is such that adjustment or fitting would otherwise not be possible (as two pipes of different diameters)”

(1) The Parties’ Positions

Danco argues the term “adaptor” is a straightforward one easily understood by a lay juror, and it should be given its plain and ordinary meaning. In the event the Court construes this term, Danco proposes “a connector for joining parts.” Danco would also agree to the first part of

⁶ Although Danco distinguished the cited prior art on the bases of “detachably attached” and “seal being maintained during a full flush of the toilet,” Fluidmaster asserts Danco did not object to the PTO’s assertion of prior art gaskets. According to Fluidmaster, the “gasket” in Pipenburg is a flapper with a hole in it, and Fluidmaster’s proposed construction as a non-adhesive object which maintains a seal through compressive resilience accommodates the Pipenburg gasket (in Pipenburg, water pressure pushing and compressing the flapper onto a flush orifice). (Ex. 3 FIGS. 5-6). Fluidmaster further asserts its construction agrees with the prior art gaskets of Smolinski (“lower valve closure 38 terminates in a conical flexible flange”)(Ex. 8), Scruggs (the “flapper valve discharge tube riser”)(Ex. 9), Clark (“donut type tank ball”)(Ex. 10), and Pino (“gasket 50 fittable about the outer surface 51 of lower section 47 in a position to form a water tight seal between top edge 28 of seating section 27 and shoulder member 44”)(Ex. 11).

Fluidmaster’s proposal: “any of various devices used in adjusting or fitting to each other the separate parts of a machine or apparatus.”

In its response, Fluidmaster takes issue with the different references to these terms and asserts the term(s) are indefinite. The Court recently denied Fluidmaster’s motion for leave to amend its Invalidity Contentions and will not consider this argument. The Court would note, however, that as used in the ‘687 Patent, Fluidmaster’s expert Dr. Klopp concedes the terms “adaptor” and “adapter” would be generally known by a person of ordinary skill in the art to be “interchangeable.” (Dkt No. 92 at 23). According to Danco, he also agrees there are several embodiments of adaptors/adapters in both the patents, and these disclosed embodiments do not serve to limit the meaning of the term. (Ex. X at 100).

Fluidmaster alternatively contends this term should be construed consistently across the ‘620 and ‘687 Patents and proposes a construction of “any of various devices used in adjusting or fitting to each other the separate parts of a machine or apparatus whose design is such that adjustment or fitting would otherwise not be possible (as two pipes of different diameters).”

(2) Analysis

The second part of Fluidmaster’s construction of the term adaptor as used in the ‘620 Patent improperly imports extraneous limitations into the meaning of the term. Nowhere in the specification of the ‘620 Patent or in its prosecution history is the adaptor necessarily constrained to connecting parts “whose design is such that adjustment or fitting would otherwise not be possible.” (*See* Dkt No. 92 at 20). For example, the adaptor of Claim 4 of the ‘620 Patent connects the dual flush mechanism to the gasket. (‘620 Patent at 13:49-52). According to Danco, nothing in the intrinsic evidence dictates it is impossible to otherwise connect the dual flush mechanism and gasket, or that such a mechanism and a gasket could not be connected with an adaptor having the

same size connector on both ends or even without an adaptor altogether. (Ex. X at 101:1-6). The Court agrees.

The Court hereby construes “**adaptor**” and “**adapter**” as “**any of various devices used in adjusting or fitting to each other the separate parts of a machine or apparatus.**”

C. “rotatably coupled” (‘620 Patent: Claim 12)

Danco’s Proposed Construction	Fluidmaster’s Proposed Construction
Needs no construction; plain and ordinary meaning. Or, if construed: “joined to allow rotation”	“coupled through rotation”

(1) The Parties’ Positions

Danco asserts this phrase is straightforward and in the context of the ‘620 Patent is a term that would be understood by a person of ordinary skill in the art; thus, it does not need construction. According to Danco, claim scope was not disavowed anywhere in the specification or during prosecution. To the extent the Court finds construction necessary, Danco proposes “joined to allow rotation.”

Fluidmaster asserts rotation is required by the word “rotatably” and does not mean “coupled and merely capable of rotation.” According to Fluidmaster, Danco’s installation manual for the physical embodiment specifically directs a user to “attach upper housing to base, and twist to lock in place.” (Ex. 23, no. 5). Thus, Fluidmaster asserts the phrase “rotatably coupled” must be understood to mean that rotation is required for coupling (e.g., that coupling is accomplished through rotation).

(2) Analysis

The phrase rotatably coupled appears in Claim 12 of the ‘620 Patent, which provides as follows:

12. The apparatus of claim 11, wherein the dual flush canister is **rotatably coupled** to the adaptor.

At his deposition, Dr. Klopp agreed that the suffix “able” would generally mean “capable of.” (Ex. X at 48:6-14). When asked to give a general overview as to the proper construction of rotatably coupled, Dr. Klopp testified the phrase could be interpreted “from the patent itself” to mean “something that can be rotated after coupling.” (*Id.* at 102:16-22).

The Court agrees with Danco that there is nothing in the record to indicate the claims should be limited in scope to the single embodiment of Danco’s dual flush converter product as proposed by Fluidmaster. However, the Court finds the phrase rotatably coupled needs construction. Rather than “joined to allow rotation,” the Court construes this phrase in line with Mr. Jones’ statement in his declaration that “rotatably coupled” is simply “connected by turning.” (Jones Decl., ¶ 61).

The Court therefore hereby construes **“rotatably coupled”** to mean **“connected by turning.”**

D. “actuator” (‘620 Patent: Claim 22)

Danco’s Proposed Construction	Fluidmaster’s Proposed Construction
Needs no construction; plain and ordinary meaning. Or, if construed: “mechanism to start a process”	Indefinite; Or, if construed: “part or assembly which causes movement”

(1) The Parties’ Positions

Danco asserts this term should be afforded its plain and ordinary meaning because the term is easily understood. According to Danco, further “simplification is unnecessary and would only overcomplicate an otherwise easily understood phrase.” (Dkt. No. 88 at 20). In the event the Court construes this phrase, Danco proposes a “mechanism to start a process.”

In response, Fluidmaster argues the term is indefinite. According to Fluidmaster, a person of ordinary skill in the art is not clearly able to understand what is meant by “actuator” for the following reasons:

(1) There are no figures showing the installation of an adapter and dual flush canister to a preexisting toilet with the addition of an actuator to control the canister.

(2) Danco has not shown actuator to be a term of art within the field, and there is no suggestion that a general purpose dictionary definition would be appropriate.

(2) Analysis

The term actuator is not found anywhere except Claim 22 of the ‘620 Patent:

22. The method of claim **21**, further comprising the step of installing an **actuator** that triggers an operation of the dual flush canister.

(‘620 Patent at 14:52-54). Fluidmaster argues the term has no support in the specification; the drawings do not illustrate an actuator; and nowhere does the ‘620 Patent identify or illustrate a step of installing an actuator to trigger the operation of a dual flush canister.

Danco asserts Dr. Klopp is able to easily understand the term, as evidenced by the fact that he freely used the term and derivatives of it in his deposition many times, with several of the references referring to “actuators” in connection with toilets. (*See, e.g.*, Ex. X at 29:24 - 30:2 (“the technology in this case where there’s one valve but it shuts off sooner or later depending on how it’s *actuated*”); 30:18-19 (“You have to have a way to *actuate* it, *make it go*.”); 51:2-3 (“Then you need some way to *actuate* said valve.”); 58:19-20 (“That’s typically the level *actuated* valve that *controls filling of the gravity tank after a flush*.”); 95:line 18 (“*flush handle*, which you might call the *actuator* here.”); 196:11-12 (“You have to install the *handle aspect* into the old hole in the tank for *actuation*.”) (emphases added). Dr. Klopp was able understand from the ‘620 Patent with enough reasonable certainty to give a definition of the term actuator when asked at deposition. *See*

id. at 76:6-15. He stated it depends on the context, but generally speaking, “a mechanical engineer would view an actuator as something like a hydraulic cylinder, pneumatic cylinder, an electric solenoid, a motor driven screw and nut, a rack and pinion driven by a motor.” *Id.* According to Danco, none of the ways Dr. Klopp used the term actuator with respect to toilets is inconsistent with Danco’s proposed construction.

Fluidmaster has failed to demonstrate the term actuator is so unwieldy as to warrant a finding of indefiniteness. *See Exxon Research & Eng’g Co. v. United States*, 265 F.3d 1371, 1375 (Fed. Cir. 2001) (“If the meaning of the claim is discernible, even though the task may be formidable and the conclusion may be one over which reasonable persons will disagree, we have held the claim sufficiently clear to avoid invalidity on indefiniteness grounds.”); *Halliburton Energy Servs., Inc. v. M-I LLC*, 514 F.3d 1244, 1249-50 (Fed. Cir. 2008) (noting the “standard [for finding indefiniteness] is met where an accused infringer shows by clear and convincing evidence that a skilled artisan could not discern the boundaries of the claim based on the claim language, the specification, and the prosecution history, as well as her knowledge of the relevant art area”). Fluidmaster’s indefiniteness argument is hereby expressly rejected.

The Court now considers Fluidmaster’s alternative proposed construction and specifically whether the term actuator should be construed to include the importation of “movement.” In *Sunrace Roots Enter. Co. v. SRAM Corp.*, 336 F.3d 1298 (Fed. Cir. 2003), the court noted the parties and the district court agreed that the ordinary meaning of “shift actuator” to one of ordinary skill in the art was “a mechanism that controls the changing of gears.” *Id.* at 1302. The Federal Circuit found the district court erred in relying on “various statements in the written description to conclude that the term shift actuator should be limited to a device containing the cam structure of

the preferred embodiment.” *Id.* at 1304. According to the court, there was insufficient evidence to depart from the ordinary meaning of “shift actuator.” *Id.*

Here, the Court finds Fluidmaster’s alternative proposed construction improper because it imports “causes movement” when there is nothing in the specification or file history warranting such a limitation. Mr. Jones testified a light switch is an example of an actuator, and it starts a process even though “movement” is not required. (Ex. 24 at 139:22-140:10).

The Court therefore hereby construes **“actuator”** to mean **“mechanism to start a process.”**

E. “basket structure” (‘687 Patent: Claims 4, 9, 13, 14, 19, and 20)

Danco’s Proposed Construction	Fluidmaster’s Proposed Construction
No construction needed; plain and ordinary meaning. Or, if construed: “basket-shaped structure”	“a spacer having two parallel rings vertically separated by connecting members, the lower ring having a horizontal orientation (e.g. a floor).”

(1) The Parties’ Positions

According to Danco, Fluidmaster cannot overcome the “heavy presumption” in favor of giving this phrase its plain and ordinary meaning of the claim language. *Johnson Worldwide*, 175 F.3d at 989. Alternatively, Danco asserts a “basket structure” is simply a “basket-shaped structure.” (Ex. J (“anything like a basket in shape or use”)) (Ex. K (“something constructed or built”)). Danco further asserts Fluidmaster attempts to improperly limit this phrase with the following additions: (1) space; (2) two parallel rings; and (3) lower ring having a horizontal orientation.

Fluidmaster asserts its proposed construction appropriately describes the scope of this phrase as elected and disclaimed through prosecution, reflects the meaning understood by a person of ordinary skill in the art, and does not import limitations from the specification. According to Fluidmaster, the specification provides that Figs 15-17 and 18-23 “show views of adapters that include a basket structure.” (‘687 Patent at 2:10-11). Fluidmaster asserts, in response to an office action, Danco disclaimed scope¹⁸ by responding to a restriction requirement, and “elect[ing] Species V [Figs. 18-23] without traverse.” (Ex. 14). Danco admitted that original Claims 1-22 apply to Species V, and further argued that “[original] Claims 21-22 are generic to species I, IV, and V.” Because original Claims 21 and 22 issued (as Claims 20 and 21), Fluidmaster argues it necessarily follows that the broadest possible claim scope available to Danco is limited to those species found in Figs. 3A-C, 15-17, 18-23. *See St. Jude Med., Inc. v. Access Closure, Inc.*, 729 F.3d 1369, 1378 (Fed. Cir. 2013).

According to Fluidmaster, a review of the basket structure found in Figs. 3A-C, 15-17, and 18-23 reveals the common characteristics found across these species are: (i) the structure forms a spacer, (ii) the structure has two parallel rings, (iii) the two parallel rings are vertically separated by connecting members, and (iv) the lower parallel ring has a horizontal orientation. (Klopp Decl. of Responsive Brief at 27-29). Fluidmaster asserts these characteristics are also consistent with the commonly accepted understanding of “basket.”

(2) Analysis

Claim 4 of the ‘687 Patent provides as follows:

4. An apparatus, comprising:

a **basket structure** having a first end and a second end, the first end being configured to couple to a dual flush canister for a toilet, the dual flush canister being configured to provide both a short flush and a long flush of the toilet;

According to Danco, this language is so easily understood that further simplification is unnecessary and would only overcomplicate an otherwise easily understood phrase. (Jones Decl. at ¶ 83). The Court agrees. As noted by Mr. Jones, the '687 Patent discloses several examples of a basket structure that support the phrase's plain and ordinary meaning. ('687 Patent at Figs. 10A-D, 14A-B, 15-23) (Jones Decl. at ¶ 84).

Fluidmaster's proposed construction adds into the plain language of the phrase the limitations of "a spacer having two parallel rings vertically separated by connecting members, the lower ring having a horizontal orientation." (Jones Decl. at ¶ 86). A person of ordinary skill in the art could and would understand the term basket structure to be a descriptive term for the element referenced in Claims 4, 9, 13-14, and 19-20 of the '687 Patent. (Ex. V at 148:9-151:4, 152:11-22). Fluidmaster's attempts to read in limitations from disclosed embodiments at Figs. 3A-C, 15-17 and 18-23 in violation of Federal Circuit precedent. *See Phillips*, 415 F.3d at 1323 ("[A]lthough the specification often describes very specific embodiments of the invention, [the Federal Circuit has] repeatedly warned against confining the claims to those embodiments.").

The Court finds no construction necessary for "**basket structure.**"

F. "second end" ('687 Patent: Claims 4, 13, 14, 20)

Danco's Proposed Construction	Fluidmaster's Proposed Construction
<p>No construction needed; plain and ordinary meaning.</p> <p>Or, if construed: "the latter of two extremities"</p>	<p>"the lower ring having a horizontal orientation (e.g. a floor) of the basket structure."</p>

(1) The Parties' Positions

Danco asserts no construction of this phrase is necessary, but if it is, a "second end" is simply "the latter of two extremities." (Ex. J ("being the latter of two equal parts;" "part or place

at or adjacent to an extremity”)) (Ex. K (“the portion of an area or territory that lies at or by the termination”)). According to Danco, the ‘687 Patent discloses several examples of a second end that support this proposed construction. (‘687 Patent at Figs. 4D, 22A) (Jones Decl. at ¶ 90).

In response, Fluidmaster asserts the Court should construe second end of the basket structure as “the lower ring having a horizontal orientation (e.g. a floor) of the basket structure.” Considering its proposed construction of a basket structure as “two parallel rings vertically separated by connecting members, the lower ring having a horizontal orientation (e.g. a floor)” and further considering “first end” has been established as the top ring with slots and annular groove, Fluidmaster asserts a person of ordinary skill in the art would consult the figures and conclude the second, lower parallel ring having a horizontal orientation is the “second end.”

(2) Analysis

Claim scope was not disavowed anywhere in the specification or during prosecution of the ‘687 Patent. Fluidmaster’s proposed construction improperly adds into the plain language of the phrase the limitations of “the lower ring having a horizontal orientation (*e.g.*, a floor) of the basket structure.” (Jones Decl. at ¶ 92). As urged by Danco, this is an attempt by Fluidmaster to import a limitation into the meaning of a term based on how it is used, as opposed to what it is improperly imports a limitation from a preferred embodiment. *See Phillips*, 415 F.3d at 1323.

The Court hereby construes “**second end**” to mean “**the latter of two extremities.**”

VI. CLAIM PHRASES ALLEGED TO BE COVERED BY 35 U.S.C. § 112, ¶ 6

Fluidmaster asserts the following phrases in the asserted claims of the ‘687 Patent should be governed by the means-plus-function provisions of 35 U.S.C. § 112, ¶ 6:

- (1) “flush opening” / “a flush opening configured to mate to a basket structure of a dual flush canister for a toilet;”
- (2) “first end” / “the first end being configured to couple to a dual flush canister;”

(3) “tab(s)” / “tabs extending inward;”

(4) “the plurality of tabs being configured to engage a lip of a flush opening of a flush valve previously installed in the toilet;”

(5) “adapter flush opening of a flush valve adapter;” and

(6) “circular support structure” / “a circular support structure configured to align the dual flush canister with the dual flush opening.”

(Dkt. No. 92-2 at 17-38). Danco asserts § 112, ¶ 6 does not apply and contends the phrases should all be afforded their plain and ordinary meaning as understood by one of ordinary skill the art.

The parties seek to construe the claims as follows:

“flush opening” (Claim 4)	
Danco’s Proposed Construction	Fluidmaster’s Proposed Construction
Not a “means-plus-function” claim. Needs no construction; plain meaning.	Governed by 35 U.S.C. § 112, ¶ 6 and limited to structure or its equivalents. “Orifice of a flush valve.”
“a flush opening configured to a mate to a basket structure of a dual flush canister for a toilet” (Claim 1) / “adapter flush opening of a flush valve adapter” (Claim 14) / “flush opening” (Claim 16)	
Danco’s Proposed Construction	Fluidmaster’s Proposed Construction
Not a “means-plus-function” claim. Needs no construction; plain meaning.	Governed by 35 U.S.C. § 112, ¶ 6 and limited to structure or its equivalents, identified below. <u>Function</u> : mate to a basket structure of a dual flush canister for a toilet <u>Structure</u> : “upper flange and ear structure of adapter fittings 603, 604 via gasket 606”

“first end” / “the first end being configured to couple to a dual flush canister (Claims 4, 7, 14, 17, 20)	
Danco’s Proposed Construction	Fluidmaster’s Proposed Construction
Not a “means-plus-function” claim. Needs no construction; plain meaning.	Governed by 35 U.S.C. § 112, ¶ 6 and limited to structure or its equivalents, identified below. <u>Function</u> : couple to a dual flush canister <u>Structure</u> : “top ring of adapter 133 having internal slots 233 and internal annular groove 236”
“tabs” / “tabs extending inward” / “the plurality of tabs being configured to engage a lip of a flush opening of a flush valve previously installed in the toilet” (Claims 4, 14)	
Danco’s Proposed Construction	Fluidmaster’s Proposed Construction
Not a “means-plus-function” claim. Needs no construction; plain meaning.	Governed by 35 U.S.C. § 112, ¶ 6 and limited to structure or its equivalents, identified below. <u>Function</u> : engage a lip of a flush opening of a flush valve previously installed in the toilet. <u>Structure</u> : “tabs of the clamping arms 913/933”

“circular support structure” / “a circular support structure configured to align the dual flush canister” (Claims 20, 21)	
Danco’s Proposed Construction	Fluidmaster’s Proposed Construction
Not a “means-plus-function” claim. Needs no construction; plain meaning.	Governed by 35 U.S.C. § 112, ¶ 6 and limited to structure or its equivalents, identified below. <u>Function</u> : Align the dual flush canister with the flush opening <u>Structure</u> : “clamp 136, or sleeve adapter 180”

According to Fluidmaster, the “tabs” term is governed by § 112, ¶ 6 because “tab(s)” does not clearly identify structure and is described through the functional language, “configured to engage a lip of a flush opening of a flush valve previously installed in the toilet.” (Klopp Decl. of Responsive Brief at 32). Fluidmaster asserts “tabs” and “tabs extending inward” relate to a basket structure, but is non-specific and inconsistent with other uses of “tabs” in the specification. For example, the specification provides that “[a] tab 199 may be used to allow for insertion, removal, and adjustment of the cam adjuster 190 between the overflow tube 103 and the clamp 136.” (‘687 Patent at 4:50-53). Fluidmaster asserts this “tab” is not related to a basket structure. Similarly, Fluidmaster contends “[a]lignment tab 533” cannot be the “tab” disclosed in the claim because it is not configured to “engage a lip of a flush opening.” Instead, alignment tab 533 is for engaging “alignment notch 503 to facilitate alignment of the gasket 539 on the adapter 133.” (‘687 Patent, 6:49-53). Thus, Fluidmaster argues “tabs / tabs extending inward” does not convey sufficient structure for a person of ordinary skill in the art to understand the scope of the term.

Fluidmaster further asserts “circular support structure” is governed by § 112, ¶ 6 because the phrase does not convey any clear structure and is described through the functional language,

“configured to align the dual flush canister with the flush opening.” (Klopp Decl. of Responsive Brief at 35). “Circular support structure” relates to “an apparatus,” both of which Fluidmaster asserts are non-specific. According to Fluidmaster, when “circular support structure” is paired with “configured to,” it operates as a “nonce” term, which claims nothing more than a means to “align the dual flush canister with the flush opening.” Thus, Fluidmaster contends the “circular support structure” should be construed as the corresponding structure found in the specification for accomplishing the claimed function, if any. Fluidmaster asserts the only structure potentially capable of aligning a dual flush canister with a flush opening is (semi-circular) clamp 136. (Figs. 3A-C, 15-17, and 18-23).

As noted above, a patentee may set out the elements of a claim in a so-called means-plus-function format. 35 U.S.C. § 112, ¶ 6. The patentee may recite in the claim a “means for” achieving a certain function. In exchange for this convenience in claim drafting, the patentee must disclose corresponding structure in the specification. *O.I. Corp. v. Tekmar Co.*, 115 F.3d 1576, 1583 (Fed. Cir. 1997). If the patentee fails to provide corresponding structure sufficient to enable a person of ordinary skill in the art to make and use the invention, then the claim is invalid. See 35 U.S.C. § 112, ¶ 1. If the patentee provides sufficient corresponding structure, then the claim scope encompasses that structure “and its equivalents.” *Id.* at § 112, ¶ 6; *see also Default Proof Credit Card Sys. v. Home Depot U.S.A., Inc.*, 412 F.3d 1291, 1298 (Fed. Cir. 2005).

A corresponding structure need not enable the claimed invention, rather it need only “include all structure that actually performs the recited function.” *Default Proof Credit Card Sys.*, 412 F.3d at 1298. A structure disclosed is only a “corresponding structure” if the “specification or prosecution history clearly links or associates that structure to the function recited in the claim.” *Med. Instrumentation & Diagnostics Corp. v. Elekta*, 344 F.3d 1205, 1210 (Fed. Cir. 2003).

In *Williamson v. Citrix Online, LLC*, the Federal Circuit revised the standard for determining whether a claim invokes mean-plus-function treatment under § 112, ¶ 6. *Williamson*, 792 F.3d 1339 (Fed. Cir. 2015). Specifically, the Federal Circuit held the standard for determining whether a phrase invokes § 112, ¶ 6 is “whether *the words of the claim* are understood by persons of ordinary skill in the art to have a sufficiently definite meaning as the name for structure.” *Id.* at 1349 (emphasis added). The use of the word “means” creates a presumption that § 112, ¶ 6 applies. *Id.* On the other hand, the absence of the word “means” creates a presumption that § 112, ¶ 6 does not apply. *Id.*

None of the above terms or phrases suggested by Fluidmaster as invoking § 112, ¶ 6 uses the word “means.” Because each of the above-referenced phrases lacks the word “means,” each of them is presumed not to invoke § 112, ¶ 6. *Williamson*, 792 F.3d at 1349. It is Fluidmaster’s burden to establish the presumption is overcome by demonstrating the phrases either fail to recite sufficiently definite structure or recite function without reciting sufficient structure for performing that function. *Id.* Fluidmaster has not rebutted the presumption that § 112, ¶ 6 does not apply to these phrases.⁷

The Court finds construction unnecessary, noting Fluidmaster did not set forth a proposed a separate, specific construction for any of these claim phrases beyond its § 112, ¶ 6 allegations.

VII. CONCLUSION

The Court hereby orders the claim terms addressed herein construed as indicated. A chart summarizing these constructions is attached as Exhibit A.

⁷ Danco points out the PTAB noted Fluidmaster had “effectively taken the position [in its IPR petition on the ‘687 Patent] that the claims do not include means-plus-function claim limitations.” (Ex. Y at 13).

The parties are further ordered that they may not refer, directly or indirectly, to each other's claim construction positions in the presence of the jury. Likewise, the parties are ordered to refrain from mentioning any portion of this opinion, other than the actual constructions adopted by the Court, in the presence of the jury. Any reference to claim construction proceedings is limited to informing the jury of the constructions adopted by the Court.

SIGNED this 22nd day of September, 2017.



CAROLINE M. CRAVEN
UNITED STATES MAGISTRATE JUDGE

EXHIBIT A

Disputed Claim Term	Patent / Claims	Court's Construction
“detachably attached”	<u>‘620 Patent</u> 1, 4	“designed for separation”
“flush valve”	<u>‘620 Patent</u> 1, 21 <u>‘687 Patent</u> 4, 14	“a valve located at the bottom of a toilet tank used to discharge water from the toilet tank to a toilet bowl”
“dual flush canister”	<u>‘620 Patent</u> 11, 12, 21, 22 <u>‘687 Patent</u> 4, 7, 9, 14, 17, 19, 20	“generally cylindrical-shaped mechanism providing for two flush volumes”
“gasket”	<u>‘620 Patent</u> 1, 4, 21	“a rubber ring, for placing around a joint to make it watertight”
“adaptor” / “adapter”	<u>‘620 Patent</u> 4, 11, 12, 21 <u>‘687 Patent</u> 14	“any of various devices used in adjusting or fitting to each other the separate parts of a machine or apparatus”
“rotatably coupled”	<u>‘620 Patent</u> 12	“connected by turning”
“actuator”	<u>‘620 Patent</u> 22	“mechanism to start a process”
“basket structure”	<u>‘687 Patent</u> 4, 9, 13, 14, 19, 20	No construction necessary; plain and ordinary meaning
“second end”	<u>‘687 Patent</u> 4, 13, 14, 20	“the latter of two extremities”
“flush opening”	<u>‘687 Patent</u> 4	Not a “means-plus-function” phrase governed by § 112, ¶ 6
“a flush opening configured to mate to a basket structure of a dual flush canister for a toilet” (claim 1) / “adapter flush opening of a flush valve adapter” (claim 14) / “flush opening” (claim 16)	<u>‘687 Patent</u> 14	Not a “means-plus-function” phrase governed by § 112, ¶ 6
“flush opening”	<u>‘687 Patent</u> 20	Not a “means-plus-function” phrase governed by § 112, ¶ 6
“first end” / “the first end being configured	<u>‘687 Patent</u> 4, 7, 14, 17, 20	Not a “means-plus-function” phrase governed by § 112, ¶ 6

to couple to a dual flush canister” (claims 4, 14, 20)		
“tabs” / “tabs extending inward” (claim 4, 14) / “the plurality of tabs being configured to engage a lip of a flush opening of a flush valve previously installed in the toilet” (claim 4)	<u>‘687 Patent</u> 4, 14	Not a “means-plus-function” phrase governed by § 112, ¶ 6
“circular support structure” / “a circular support structure configured to align the dual flush canister” (claim 20)	<u>‘687 Patent</u> 20, 21	Not a “means-plus-function” phrase governed by § 112, ¶ 6